Heart Disease Prevention: The Stress Factor

The connection of stress to our immune system function has long been understood by anyone who has come down with a cold after a stressful event. But how does stress impact heart disease?

Various stressful factors, including depression, anxiety, hostility, low social support, isolation, occupational and marital stress are related to risk of cardiovascular disease. These adverse conditions combine with traditional biological and behavioral, lifestyle risk factors.\(^1\) Estimated prevalence of major depression in the US is 14%, but up to 30% in cardiac patients. Depression and anxiety stimulates the autonomic nervous system and is pro-inflammatory (associated with increases in C-reactive protein, fibrinogen, IL-6 and other inflammatory markers.)\(^2\)

This is important information because it tells us how you think about and react to stress, even everyday stressors, is associated with inflammation, an essential building block in cardiovascular disease and many other medical conditions.\(^3,4\) More studies are establishing the relationship of stress to diabetes (metabolic syndrome) which is also associated with heart disease.\(^5\)

Poor coping strategies also become stress factors that relate to cardiovascular disease risk include pessimism (negative appraisal) which is related to the risk of all-cause mortality.\(^6\) Conversely, optimism (positive appraisal) showed 30% lower rates of cardiac mortality.\(^7\) An analysis of 70 studies show positive wellbeing to be associated with lower mortality.\(^8\) Work stress is associated with a doubled increase in mortality, with higher risks when accompanied by poor emotional and social support.\(^9\) Furthermore, chronic occupational exposure to stress can influence the rate of depression and PTSD.\(^10\) Type A personality traits, often associated with competitive, achievement-oriented individuals, are strongly linked to heart disease, but when combined with behavior modification (stress management,) these individuals show a reduction in repeated coronary events.\(^11\)

Previously, there had been no comprehensive stress management-based behavioral intervention program intended to address all of these domains of cardiovascular risk and focus on sustained lifestyle change. Using the results of blood work and bodyscan results, we examined the efficacy of a lifestyle intervention program, The RENEW Program, in a randomized clinical trial. Changes in global health habits, which included nutrition; exercise; type A behavior; perception of stress; decreasing pessimism, depression and anxiety were all significantly improved among intervention group participants. Improvements in perception of stress were highly significant in the intervention vs. control group.\(^12\) The program greatly impacted positive coping strategies and increased measures of resilience. These behavioral changes in turn affected health outcomes for study participants shown in their follow-up bodyscans and blood work, including slowing, stopping or reversing heart plaque progression and more.\(^13\) Heart disease prevention must include stress management training in addition to behavioral and lifestyle changes to prevent the progression of heart disease.\(^14\)

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1. Bennett and Berkman, Preventive Cardiology 2005.
2. Lichtman et al. 2014.
6 In 7,216 subjects, extent of negative appraisal related to the risk of all-cause mortality Grodbardt, 2009.
7 The Women’s Health Initiative showed among 97,253 women that those who were optimistic had 30% lower rates of cardiac mortality. Tindle, 2009.
8 Meta-analyses involving 70 studies shows positive well-being to be associated with lower mortality. Chida, 2008.
10 Chronic occupational exposures can influence the rate of PTSD and depressive disorders in first responders and military personnel. Walker et al. 2016.

Alisa Eisenberg, MFT is the author of The RENEW Program. To learn how the program may benefit you, call for a free consultation, 949-715-7307. The program may be covered by your insurance.